Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	}	
	}	
Revision of Part 15 Rules of the Commission's	}	
Rules Regarding Ultra-Wideband	}	ET Docket No. 98-153
Transmission Systems	}	

Comments of the Ground Penetrating Radar Circle of Finland

The Ground Penetrating Radar Circle of Finland submits these comments in response to the Notice of Proposed Rule Making (NPRM), FCC 00-163, and the request for comments on testing (performed by NTIA and others) in the proceedings referenced above. These comments address the most recent submissions provided to the FCC under this docket, including recommendations and conclusions made in submission by others suggesting continued rule making in this proceeding and proposed changes to Part 15 Rules.

The Ground Penetrating Radar Circle of Finland is an independent GPR user organization with 40 members. The group members, who have backgrounds in geophysics, geology and engineering, are employed by government organizations, universities and private consulting companies. Ground penetrating radar and its geophysical applications is an integral tool for members of the group.

The main purpose of the GPR Circle of Finland is to exchange professional information and experience and keep GPR users informed of new developments through seminars and meetings. The GPR Circle of Finland is also involved in the research and development of ground penetrating radar techniques.

Ground penetrating radar is an invaluable tool for investigating the subsurface and we believe that GPR instruments are not causing interference problems for the systems in question. GPR antennas are used either in direct contact with the ground or within 0.5-1 m of the surface, by design most of the energy is coupled into the ground. In addition, the power output of such systems is low and they are used in specific engineering or environmental projects over localized areas for short periods of time.

GSM telecommunication systems and GPS systems are widely used in Finland. Since it was first introduced in Finland, over 15 years ago, there has not been a single instance where the use of GPR interfered with communications, guidance or positioning systems. Normally it is vice versa, other equipment such as GSM phones and radio transmitters interfere with the operation of GPR systems. Moreover, we are continuously using GPR systems in close proximity (about 1 m) with GPS receivers (see Fig. 1) and there have not been any problems whereby the GPR system interfered with the GPS device. Any such interference would be very detrimental to our own operations.

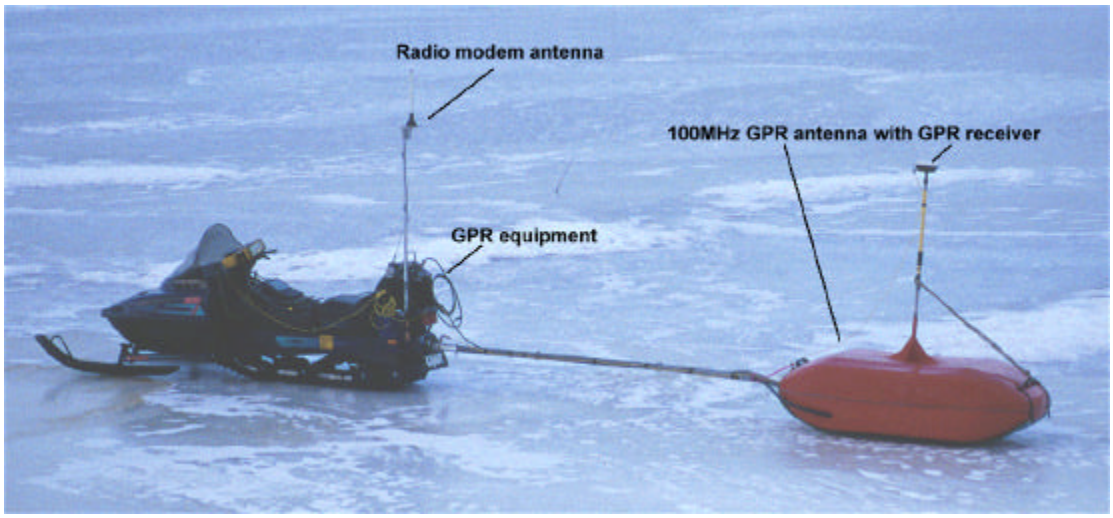

Fig. 1. GPR system measuring simultaneously with the GPS equipment.

In Finland approximately 120 people depend on the use of GPR for their livelihood. At the same time the application of GPR methods in Finland has extended significant societal and economic benefits to clients of GPR professionals. The demand for GPR-based surveys and the innumerable advantages they provide is increasing. On behalf of the members of the Ground Penetrating Radar Circle of Finland, we would like to express our concern that if the proposed FCC restrictions concerning GPRs, become regulations in the U.S.A., it will have a negative impact on the industry in Europe.

Respectfully submitted,

The board of the Ground Penetrating Radar Circle of Finland:
Veli-Pekka Sirniö (veli-pekka.sirnio@kemijoki.fi)
Eija Vallimies (eija.vallimies@gsf.fi)
Keijo Nuutinen (keijo.nuutinen@oulu.fi)
Mika Silvast (mika.silvast@roadscanners.com)